

IT IS CLAIMED

1. A method for a working system to provide transaction information to a redundant system in a data network, the working system coupled to a plurality of nodes, the method comprising:

- 5 identifying a first transaction at the working system;  
identifying a second transaction at the working system;  
characterizing the first and second transactions using relationship information to generate condensed transaction information corresponding to the first and second transactions;  
10 providing the condensed transaction information to the redundant system.

2. The method of claim 1, wherein the relationship information comprises a characteristic common to both the first and second transactions.

3. The method of claim 1, wherein the relationship information is user defined.

15 4. The method of claim 1, wherein the relationship information comprises session information.

5. The method of claim 1, wherein the relationship information comprises accounting server information.

20 6. The method of claim 1, wherein the relationship information comprises cable modem information.

7. The method of claim 1, wherein the working system is associated with a cable network headend.

8. The method of claim 1, further comprising maintaining a log storing the first and second transactions at the working system.

25 9. The method of claim 1, further comprising maintaining a log storing the condensed transaction information at the working system.

10. The method of claim 1, wherein the working system is coupled to a plurality of nodes on an access network.

30 11. The method of claim 10, wherein the access network is a cable network implemented in accordance with a DOCSIS standardized protocol, and wherein said nodes are cable modems.

12. A method for a working routing engine associated with a data network to process transaction information associated with a plurality of nodes, the method comprising:

identifying transaction information associated with a plurality of transactions;

5       condensing the transaction information using relationship information corresponding to the plurality of transactions to generate condensed transaction information; and

providing the condensed transaction information to a redundant routing engine.

13. The method of claim 12, wherein the relationship information comprises  
10 a characteristic common to both the first and second transactions.

14. The method of claim 12, wherein the relationship information is user defined.

15. The method of claim 12, wherein the relationship information comprises session information.

15       16. The method of claim 12, wherein the relationship information comprises accounting server information.

17. The method of claim 12, wherein the relationship information comprises cable modem information.

20       18. The method of claim 12, wherein the working system is associated with a cable network headend.

19. The method of claim 12, further comprising maintaining a log storing the first and second transactions at the working system.

20. The method of claim 12, further comprising maintaining a log storing the condensed transaction information at the working system.

25       21. The method of claim 12, wherein the working system is coupled to a plurality of nodes on an access network.

22. The method of claim 21, wherein the access network is a cable network implemented in accordance with a DOCSIS standardized protocol, and wherein said nodes are cable modems.

30       23. A cable network headend coupled to a plurality of nodes in a data network, comprising:

a working system having a processor coupled to memory and an interface, the first processor configured to identify transaction information and condense the transaction information using relationship information, the interface coupled to the processor for transmitting the condensed transaction information;

5        a redundant system having a second processor coupled to second memory and a second interface, the second interface for receiving the condensed transaction information.

24.    The apparatus of claim 23, further comprising a plurality of line cards coupled to the working system.

10       25.    The apparatus of claim 23, further comprising a plurality of line cards coupled to the redundant system.

26.    The method of claim 23, wherein the relationship information comprises a characteristic common to both the first and second transactions.

15       27.    The apparatus of claim 23, wherein the relationship information comprises session information.

28.    The apparatus of claim 23, wherein the relationship information comprises accounting server information.

29.    The apparatus of claim 23, wherein the relationship information comprises cable modem information.

20       30.    The apparatus of claim 23, wherein the working system is coupled to a plurality of nodes on an access network.

31.    The apparatus of claim 30, wherein the access network is a cable network implemented in accordance with a DOCSIS standardized protocol, and wherein said nodes are cable modems.

25       32.    A working system coupled to a redundant system and a plurality of nodes in a data network, the working system comprising:

memory;

at least one processor coupled to memory, the at least one processor configured to identify transaction information associated with a plurality of transaction and to  
30    characterize the transaction information using relationship information to generate condensed transaction information;

an interface coupled to the processor, the interface configured to provide condensed transaction information to the redundant system.

33. The working system of claim 32, wherein the relationship information comprises a characteristic common to both the first and second transactions.

5 34. The working system of claim 32, wherein the relationship information comprises session information.

35. The working system of claim 32, wherein the relationship information comprises accounting server information.

10 36. The working system of claim 32, wherein the relationship information comprises cable modem information.

37. The working system of claim 32, wherein the working system is associated with a cable network headend.

38. The working system of claim 32, wherein the redundant system is associated with a cable network headend.

15 39. The working system of claim 32, further comprising maintaining a log storing the first and second transactions at the working system.

40. The working system of claim 32, further comprising maintaining a log storing the condensed transaction information at the working system.

20 41. The working system of claim 32, wherein the working system is coupled to a plurality of nodes on an access network.

42. The working system of claim 41, wherein the access network is a cable network implemented in accordance with a DOCSIS standardized protocol, and wherein said nodes are cable modems.

25 43. A computer program product for configuring a working system to provide transaction information to a redundant system, the working system coupled to a plurality of nodes in a data network, the computer program product comprising:

computer code for identifying a first transaction at the working system;

computer code for identifying a second transaction at the working system;

30 computer code for analyzing the first and second transactions using relationship information to generate condensed transaction information corresponding to the first and second transactions;

computer code for providing the condensed transaction information to the redundant system.

44. The computer program product of claim 43, wherein the relationship information comprises a characteristic common to both the first and second transactions.

45. The computer program product of claim 43, wherein the relationship information comprises session information.

46. The computer program product of claim 43, wherein the relationship information comprises accounting server information.

47. The computer program product of claim 43, wherein the relationship information comprises cable modem information.

48. A working routing engine associated with a cable network headend configured to condense transaction information associated with a plurality of nodes in a data network, the working routing engine comprising:

means for identifying transaction information associated with a plurality of transactions;

means for condensing the transaction information using relationship information corresponding to the plurality of transactions to generate condensed transaction information; and

means for providing the condensed transaction information to a redundant routing engine.

49. The working routing engine of claim 48, further comprising providing the condensed transaction information to the redundant system.

50. The working routing engine of claim 48, wherein the relationship information comprises a characteristic common to both the first and second transactions.

51. The working routing engine of claim 48, wherein the relationship information comprises session information.

52. The working routing engine of claim 48, wherein the relationship information comprises accounting server information.

53. The working routing engine of claim 48, wherein the relationship information comprises cable modem information.